

OFFICE OF EMERGENCY MANAGEMENT AND COMMUNICATIONS CITY OF CHICAGO

May 18, 2012

Ms. Marlene S. Dortch Secretary 445 12th Street S.W. Room 2-B450 Washington, DC 20554

Re: WT docket No. 99-87

REQUEST FOR WAIVER OF COMMISSION RULES EXPEDITED ACTION REQUEST

Dear Ms. Dortch:

The City of Chicago Office of Emergency Management Communications Request for Waiver of Federal Communications Commission Narrowbanding Jan 1, 2013 deadline for migration. In the matter of: Implementation of Section 309 (j) and 337 of The Communications Act of 1934 as Amended. For the Promotion of Spectrum Efficient Technologies On Certain Part 90 Frequencies.

This Request is submitted in accordance with the guidance set forth in Public Notice, DA 11-1189, as of July 13, 2011.

If any questions or concerns arise from the request all inquiries should be directed to Captain of the Chicago Police Department Martin E. Ryczek at the Office of Emergency Management Communications 312-746-9265

Captain Marty E. Ryczek City of Chicago Police Department



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Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

MAY 8, 2012

In the Matter of)	
CITY OF CHICAGO)	
Office of Emergency Management)	WT Docket No. 99-87
Communications)	
)	
Implementation of Section 309 (j), 337	
Of the Communications Act of 1934 and	
Request for Waiver of Section 90.209(b) of	
The Commission's Rules)	

Chief, Public Safety and Homeland Security Bureau

WAIVER

TIMELY ACTION REQUIRED

The City of Chicago Office of Emergency Management Communications, in accord with 47 C.F.R. § 1.925, hereby respectfully submits a requests for waiver of 47 C.F.R. § 90.209(b) for the transitioning to narrowband operation in the VHF/UHF bands. Which requires private land mobile radio licensees in the 150-174 MHz and 450-512 MHz bands to operate using channel bandwidth of no more than 12.5 kHz or equivalent efficiency by January 1, 2013 deadline. Specifically, the City of Chicago (City) seeks the support of the FCC for a 24-month conditional extension of time to complete the narrowbanding of its VHF/UHF facilities and states the following information as supporting documentation for this request, and this instant waiver request to address those facts which are applicable to section 1.925 of the Commission's rules, in which petitioner must demonstrate in its petition that;

"(i) the underlying purposes of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of a waiver would be in the public interest; or (ii) in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative."

This requested conditional waiver does follow the Public Notice recommended guideline¹ and addresses those facts applicable to the specific narrowbanding migration path defined by the Wireless Telecommunication Bureau, Public Safety and Homeland Security Bureau, and Office of Engineering and Technology.

Background

The City of Chicago is the third largest City in the United States and the county seat of Cook County with a population base of 9.8 million people within its metropolitan area extending it boarders into a portion of DuPage County. Chicago is also a major hub for industry, telecommunications and infrastructure with O'Hare International Airport being the second busiest airport in the world. During the past few years the City hosted 45.6 million domestic and overseas visitors and is one of the most important worldwide centers of commerce and trade. Located upon Lake Michigan, the City includes 234 square miles of urban landscape, with 6.9 miles of Lake Michigan water front for which it is responsible. However the Calumet River which runs through the industrial far south side and the Chicago River in the downtown both flow entirely or partially through Chicago. Chicago is also a major world financial center, with the second largest central business district in the U.S. and Seventh District of the Federal Reserve Bank of Chicago located within its jurisdiction. Chicago is also home to major financial and futures exchanges, including the Chicago Stock Exchange, the Chicago Board Options Exchange, Chicago Mercantile Exchange, and the Chicago Board of Trade. Chicago and its surrounding metropolitan area are home to the second largest labor pool in the United States with approximately 4.25 million workers and it contains 25% of the State of Illinois' population.

To provide the necessary protection and services to the millions of residents and visitors, the City employs approximately 13,000 sworn police officers and over 4,500 firefighters and 650 paramedics. Added to this large number of first responders, the City further employs hundreds of other City employees, e.g. streets and sanitation workers, which require the use of public safety communications. However, to provide the necessary maintenance, installation and upgrading of the City's numerous and complex radio systems, the City has only **16 radio technicians** due to budget constraints and hiring freezes that the City, like many local governments, has suffered due to the downturn in the economy and tax revenues. Nevertheless, with the limited manpower resources to program, reprogram, install, maintain, implement, deploy, and build new infrastructure while maintaining the highest level of integrity for the city's public safety communication system, the technicians have been able to complete a vast amount of necessary and mandated upgrades. In fact, given the demands of growth, homeland security, and FCC mandates that have all come within the same time frame, the accomplishments of the City's internal personnel has been nothing short of extraordinary.

The City has long been aware of the Commission's narrowbanding mandate and has continued its progress in taking many of the necessary steps toward completing narrowbanding of its VHF/UHF facilities for all its mission critical communications networks. The City of Chicago has been diligently upgrading its public safety communications system to provide necessary system capacity throughout the City, to improve building penetration, and promote interoperability among cooperating agencies. The City has invested tens of millions of dollars in significant infrastructure construction and narrowbanding of a new T-Band system and other UHF facilities, which are being deployed throughout the City and which are presently producing much needed, improved communications for the City's first responders and other City personnel, including the Streets and Sanitation Department, the UHF Citywide system, the UHF Zone network, and upgraded medical responsive systems.

The City is near completion of its multi-site, multi-million dollar UHF T-band fire digital system awaiting final grant of WQEW220 and its City/Countywide High Performance Data system is complete. That list of public safety radio projects is impressive alone, however, the Bureau may further note that the City has been occupied in responding to other regional and national initiatives such as expanding its video surveillance system and engagement in Operation Virtual Shield in cooperation with the Department of Homeland Security and the Department of Justice.

Simultaneously, the City has taken many of the necessary steps toward narrowbanding its UHF facilities in accord with Section 90.209(b). It has obtained modification of its licenses to reflect the proper emission designators; it has obtained licensing of narrow, adjacent frequencies for use in future expansion of its existing system; and it has narrowbanded a substantial number of its UHF subscribers including substantial investment in new infrastructure and/or reprogramming existing equipment. There can be no doubt that the City has taken good faith, material steps toward satisfying the Commission's narrowbanding requirements, including substantial investment in new infrastructure and/or reprogramming existing equipment.

PUBLIC NOTICE DA 11-1189 RELEASED JULY 13, 2013 RECOMMENDED CONTENT OF WAIVER REQUEST

And

PUBLIC NOTICE DA 12-246 RELEASED FEBRUARY 21, 2012 GUIDANCE SUPPLEMENTAL FOR LICENSEES IN THE 150-174 AND 421-512 BANDS SEEKING WAIVERS OF THE JANUARY 1, 2013 NARROWBANDING DEADLINE

Under these public notices the City believes that it's entitled to a waiver and extension of the narrowband deadline.² The Commission has included a number of factors which are relevant to the consideration and grant of this instant request. These factors include the following:

² See DA-11-1189 P N and DA-12-246 P N

(a) the steps the licensee has taken to plan for, initiate, and complete the transition to narrowband operations; (b) the size and complexity of the relevant communications system; (c) whether system equipment is narrowband-capable or must be replace or upgraded; (d) whether the licensee plans additional system upgrades or improvements in addition to converting to narrowband operation; (e) the funding sources, including whether the licensee's budget requires government approval or multi-year budget process; (f) whether the licensee's narrowbanding schedule is affected by neighboring systems due to interoperability relationship or other interdependencies; (g) the licensee's plans to minimize the negative impact of extended wideband operation on co-channel and adjacent channels operations.

a) <u>Steps already taken to plan for, initiate, and complete the transition to narrowband operations.</u>³

Although the City has been quite successful in its efforts on many public safety communications fronts, the City must be realistic and forward thinking in its application of available resources to existing and future projects. Local, regional and national mandates to upgrade and alter the City's radio networks and subscriber units have been accomplished or are well underway. However, the City's ability to navigate through the ever changing policies of new initiatives has been consistent and produces a good faith effort, if not timely to all standards which protect the public safety environment. Of specific relevance to this request, the City has performed the following installation:

- 1. The citywide, police UHF system that is comprised on 7 fixed locations and 7 frequency pairs has been narrowbanded; **Transmitters purchased and installed 14**
- 2. The City's "Zone" system employed by police personnel comprised of 13 fixed locations and 13 frequency pairs has been narrowbanded; **Transmitters purchased and installed 26**
- **3.** The City's fire digital system comprised of fixed facilities at 16 locations operating on 7 channels has been narrowbanded; **Transmitters purchased and installed 32**
- 4. Other miscellaneous UHF stand-alone systems; **Transmitters purchased and installed** 8
- **5.** The City has **purchased** approximately **15,000 new, narrowbanded radios** to comply with the Commission's mandate. This doesn't include radios which needed reprogrammed.
- **6.** Over **400 receivers** have been purchased and installed.

Yet, despite its considerable effort and significant investment to date, Chicago recognizes that it lacks the necessary manpower and resources to finalize the completion of the narrowbanding of all of its VHF/UHF facilities by January 1, 2013. The numerous demands on its limited number of radio technicians and the additional burdens on the City's budget and financial restraints has resulted in necessary considerations regarding a realistic 24 month migration plan that will accomplish narrowbanding, however, not prior to the deadline. In addition, the City has not completed its 800 MHz rebanding for which there exists substantial pressure to complete, the City must acknowledge that its allocation of available personnel, despite considerable effort, require that the City seek a waiver of Section 90.209(b) to provide it necessary relief.

b) System size and complexity.⁴

The City of Chicago's public safety critical communication system is one of the few in the United States as large, complex and has integrated multiple infrastructures into one multi-jurisdictional citywide system. The City is including all relevant Radio Station Licensed⁵ for frequency band information concerning exactly how the combination of this complex system relies upon finance, radio technician, and time. This complex system consists of Low Band-VHF-UHF-UHF T-Band-700 MHz-800 MHz and Microwave Operation.⁶

Police VHF/UHF dispatch voice operation consist of Citywide operation, Zone operation, Fire Ground, EMS, Marine, Bridge Tender, Mounted Units, Chicago Water, Hospital to Ambulance, Statewide Disaster Coordination, CTA Fire, Metro, Streets and Sanitation, Traffic, Health and Human Service/ Department of Revenue, Bureau of Electricity, Sewers/ Department of Transportation, Paging, O'Hare, Midway Airport, Emergency Tact Units, MABAS, MERCI, IEMA, IREACH including several other nationwide interoperable I-TAC and U-TAC channels, and Administration.

The 800 MHz channels are used in various types of operations; Chicago operates two 800 MHz Trunking systems operating in the Chicago area. The first of the two trunking systems is a 6 channel EMS North, EMS South, joint City/ County Operation and the Housing Authority simultaneously operating throughout the city jurisdiction. The second trunking system is an Encrypted Centralizing Voice Trunking system for the Police, Organized Crime, and Narcotic Unit.

⁴ *Id*.

⁵ See Exhibit A: City of Chicago Complete List of FCC Radio Station License

⁶ See Exhibits B through G: Chicago Area Public Safety Communications Overview Maps

Police utilizes a Data system which operates on 28 conventional channels at 32 unique locations.

A 700 MHz 12 Channel City/ County High Performance Data located at 14 unique locations.

A Multi-site 800 MHz Citywide Public Access Warning System.

c) whether system equipment is narrowband-capable or must be replace or upgraded.⁷

Although the UHF and UHF T-Band system is nearly complete, the existing conventional VHF infrastructures and radios throughout the City were purchased over 20 years ago in some places are not narrowbanding capable, cannot be reprogramed, and will require upgrading; however they're functional and sufficient while the City concentrates on the more pressing UHF and UHF T-Band system upgrade. The City has developed a plan according to its resources for the replacement of all of its transmitters, receivers, and radios over the past several years, including building a valuable new UHF T-band infrastructure. Since the existing UHF portable radios were temporarily compatible with the existing UHF network, the City was able to utilize the UHF radios until such time when resources became available. Thus, allowing the City to move forward with the purchasing of the many fixed transmitters, receivers, and radios, this in most cases required complete replacement.

The City has been in the process of the narrowband planning and the implementation of the citywide system upgrade since the FCC mandated this initiative. However, these steps necessary for replacement of this critical infrastructure and radios had to be planned in stages according to priority. The critical conventional VHF networks have taken secondary priority according to planning and resources. All of the VHF transmitters, receivers, and radios essential to daily operations within the City are on the planning and purchasing agenda for the next twenty-four months.

d) <u>whether the licensee plans additional system upgrades or improvements in</u> <u>addition to converting to narrowband operation.</u> 8

The City has diligently been working on several citywide communication renovations; most notably the recent addition is the citywide UHF T-band Fire Digital system. This system is the foundation of a new platform to improve channel capacity for the Police Zone and Citywide operations and the incorporation of an improved dispatching of our critical EMS and Fire Department. The City has also planned to construct and implement a new UHF T-band 20 channel trunked platform. The planning and use of resources for this new project for our public safety network started 12 years ago and was on track to begin with the acceptance and deployment of the Fire Digital system. This EMS and Fire dispatch system improvement is well underway and is compatible with minor adjustment within our overall UHF environment. However, with the recent changes brought on by H. R. 3630 the City is seeking additional solutions to go forward with a new trunking communications environment which is compatible with our established UHF network that will bring resolution to our capacity concerns.

Alternatives to the recent changes brought on by H. R. 3630 in the use of UHF T-band frequencies is a consideration the City has placed as high priority as it moves forward with the narrowbanding.

e) <u>the funding sources, including whether the licensee's budget requires</u> government approval or multi-year budget process. 10

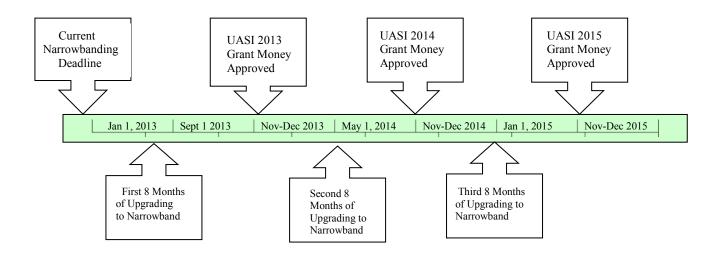
As with most of the largest cities in the United States the appropriation for extra funding is part of the much larger funding program established by the U. S. Department of Homeland Security under the Urban Areas Security Initiative (UASI). The City has prepared a tentative timeline of budget planning for the transition and finalization of the twenty-four month narrowbanding extension, through

⁸ *Id*.

⁹ As a further complication, the City must deal with the effects of *The Middle Class Tax Relief and Job Creation Act 2012 H.R.3630* upon Chicago's operation of its T-Band system.

this waiver process. The City envisions the completion of narrowbanding in logical phases, with systems being brought into full compliance pursuant to a schedule that reflects the City's priorities and resources. Those phases would commence following the City's completion of 800 MHz rebanding, which will not be completed until mid-2013, past the Commission's narrowbanding deadline. Each phase, scheduled in accord with the anticipated resources of the City, would take approximately eight months to complete. The City anticipates three 8-month phases totaling 24 months to purchase the necessary receiver equipment, to install and deploy and concurrently re-engineer the effort in view of the regulatory uncertainty associated with the City's T-Band system for the Streets and Sanitation, Medical, and VHF channels, respectively. Stated directly, the City wishes move forward upon a judicious pace to complete narrowbanding within a reasonable time frame.

City Of Chicago's Proposed Timeline for Completion Of Narrowband Initiative



f) whether the licensee's narrowbanding schedule is affected by neighboring systems due to interoperability relationship or other interdependencies. 11

This petition which is placed before the Commission for relief is only for those citywide infrastructures which are exclusively used by the City. The City's public safety network is an independent citywide system which has minimal interdependency with other public safety region area networks. It should be noted by the Commission that the City has replaced or reprogramed all infrastructure which is co-dependent or interdependent with neighboring facilities which would require support through interoperability or mutual aid response teams.

g) <u>the licensee's plans to minimize the negative impact of extended wideband</u> operation on co-channel and adjacent channels operations. 12

The City is fully aware of its obligation to avoid the creation of harmful interference to other licensees operating co-channel or adjacent channel facilities. Accordingly, the City has carefully considered the existing licensing of those channels and the licensees operating upon those channels. ¹³ In addition, the City has carefully reviewed potentially affected operations and has determined that grant of the instant request will not have a serious, negligent effect on other operators and the City is in need to conditionally continue wideband operations on their current infrastructure to keep essential communications functioning during the upgrade to the narrowband emission throughout the City, and precautions have been taken to limit the adverse effect on neighboring systems. Nevertheless, the City is not currently aware of any neighboring critical communications systems which would have any adverse effect of unacceptable interference brought on by the continual use of wideband operations.

¹¹ *Id*

¹² *Ia*

¹³ The City's efforts are in compliance with the *Narrowbanding Waiver Guidance Notice*, 26 FCC Rcd at 9649, "to minimize the negative impact of extended wideband operations on co-channel and adjacent channel operations."

The current frequency congestion within the region is shared knowledge amongst the surrounding and adjoining public safety networks. Occasionally adjustment must be made to practice safe yet responsible co-location of the allotted spectrum shared from the public safety pool of channels and the City appreciate the means of sharing channels effectively and avoiding interference problems borne out of years of operating in one of the most rf congested environments in the Country. No channel within the region's use is excluded from this type of practice of responsibility, which requires constant communication with other agencies and cooperation to achieve shared goals associated with reliable operations. The City believes that the majority of narrowbanding of other networks has already taken place, so no undue burden is expected through the granting of this waiver request for extension over the next 24 months.

The City is submitting a graphs which list the number of co-channel users and adjacent channels users are attached for better clarification on the quantity of co-located spectrum¹⁴. The two graphs list the frequencies which need additional time to migrate according to the narrowbanding mandate highlighted in blue, and also list the number of adjacent and co-channel users which currently share this spectrum within our geographical footprint according to the number of users licensed by public record of the FCC Universal Licensing System. The City deems this illustration a sufficient demonstration that it has full considered the effect of grant upon other licensees and is prepared to take all cooperative steps to avoid harmful interference.

Justification Of Waiver And Compliance Of The Law

The instant request is made pursuant to the Commission's Rules under Section 1.925. As stated In the Matter of County of St. Louis, St. Louis County, Missouri, St. Charles County, Missouri, Jefferson County 9-1-1 Dispatch Board of Jefferson County, Missouri, The East-West Gateway Council

¹⁴ See Exhibit H: Co and Adjacent Channel User Chart

of Governments, Request for Waiver of Section 90.209(b) of the Commission's Rules, WT Docket 99-87, and Order (released February 21, 2012) ("County of St. Louis"), the criteria for grant of such a request is as follows:

... to obtain a waiver of the Commission's Rules, a petitioner must demonstrate either that: (i) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the present case, and that grant of the waiver would be in the public interest; 15 or (ii) in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest or the applicant has no reasonable alternative. Id. at \P 4

To obtain a waiver of the Commission's Rules, a petitioner must demonstrate that: *the* underlying purpose of the rule(s) would not be served or would be frustrated by application to the present case, and that grant of the waiver would be in the public interest; Given the circumstances levied upon the City and the accomplishment made to date to fulfill this transition to Narrowband emission, there can be no doubt that the City is managing unique circumstances that have created a "perfect storm" of regulatory challenges.

Meanwhile, the City's efforts to overcome each separate issue have been commendable in view of the ever growing costs and timing of each obligation to fulfill in an expeditious manner, however the situation has become increasingly challenging. The grant of the City's requested waiver will be in the public interest and consistent with section of 1.925 and *Public Notice*, DA 11-1189 and *Public Notice*, DA 12-246. The Narrowbanding mandate was intended to increase scarce radio spectrum and the City demonstrated that all resources at their disposal have been utilized over the past twelve years; therefore a grant of this waiver is necessary to further comply with the Commission rules.

Imposing the deadline would be a detriment to the citizens within the Chicago area by crippling the infrastructure, and such enforcement would cause untold harm by creating an atmosphere of increased scarcity among the already severely limited spectrum used by the City's Public Safety networks.

¹⁵ See 47 C.F.R. §1.925(b)(3)(i) and 47 C.F. R. §1.925(b)(3)(ii)

Public Interest

The public interest lies foremost in the City's ability to construct and operate a public safety radio network that is fully reliable, expandable, provides protection and control for first responders, and augments the City's ability to protect the lives and property of its citizens, while concurrently promoting interoperability among cooperating agencies.

The City's multi-year effort to finance, construct, and maintain its separate and multiple radio networks throughout the jurisdiction while combining to make them interoperable assures that all public safety personnel, public property, and citizens are completely protected. The current 800 MHz system is currently being rebanded and supports the majority of our data traffic and the VHF, UHF, and UHF Tband citywide networks support our primary voice operations, utilizing various types of infrastructure and radio communication support. The narrowbanding of these voice communication systems is our priority as our primary voice traffic is supported in the VHF and UHF band. The City doesn't support a redundant system or have multiple back-ups or standby locations for all of the currently completed narrowbanded locations, nor do they have channel capacity to support the frequencies which are in need of this instant request. The public interest would not be served if the Commission pursues to enforce a relinquishment of channels by the City. Each channel is vital and essential to the voice communications each officer uses every day. With its combined efforts, the City demonstrates that with the narrowband progress and rebanding to reduce harmful radio interference while joining in increasing the overall channel capacity in the region, demonstrates fully its good faith effort to serve the public interest while also complying with the Commission's regulations. However, despite its considerable efforts, Chicago finds itself with capacity issues in attempting to deal effectively with mounting obligations.

Within *County of St. Louis* the Bureau continued its setting forth of criteria for grant of a waiver of Section 90.209(b), citing the *Narrowband Waiver Guidance Notice*. ¹⁶

 $^{^{16}}$ Id. At 9649. See, also, St. Louis County at \P 4.

We have also provided recommended guidance on the factors that licensees should address in the requests and have recommended that in addressing these factors, licensees should seek to demonstrate that '(i) they have worked diligently and in good faith to narrowband their systems expeditiously; (ii) their specific circumstances warrant a temporary extension of the deadline; and (iii) the amount of time for which a waiver is requested is no more than is reasonably necessary to complete the narrowbanding process.

The City of Chicago affirms that it has worked diligently and in good faith to narrowband their systems with only a minimal list of frequencies, licenses left to modify and a limited but crucial portion of equipment left to purchase to be in full compliance with the narrowbanding deadline, with only its Medical response teams, Street and Sanitation, and VHF conventional standalone systems absent for the mandated January 1, 2013 deadline. Additionally, it should be specifically noted that the City has already narrowbanded its VHF/UHF interoperable mutual aid equipment, UHF Zone and Citywide operations, and T-Band system including the majority of its portable radios to assure present and future compliance with the Commission's rules. In fact, the City's narrowbanding of the UHF T-band network created additional costs and delay in deploying some sites and subscriber units. For the record, the City has provided a list which will require final modification to fulfill the narrowbanding mandate. ¹⁷ Were the Bureau to survey the totality of the City's radio systems presently authorized, the Bureau would determine that the above described effort reveals a substantial amount of the radios that have been narrowbanded and, in fact, covers nearly all first responder facilities employed by the City. Therefore, grant of this request is appropriate.

¹⁷ See Exhibit J: City of Chicago Radio Station License Which Require Additional time to Narrowband

Conclusion

Therefore by the reasons set forth herein, the City of Chicago Office of Emergency Management Communications, Chicago, Illinois believes it has satisfied all the Federal Communications

Commission's requirements for granting this waiver in accordance with Section 1.925

and extension of the narrowband deadline of the Commission's rule and the guidance set forth in the Public Notice's DA 11-1189 released July 13, 2011 and DA 12-246 released February 21, 2012. The City of Chicago Office of Emergency Management requests the Federal Communication Commission recognize the measures it has taken to comply with the Narrowbanding deadline of January 1, 2013 but for the forgoing reasons and good cause shown, the City of Chicago Office of Emergency Management Communications, Chicago, Illinois hereby respectfully requests an expeditious grant of the instant waiver.

Respectfully submitted, Chicago, Illinois Office of Emergency

Management Communications

Its Authorized Representative

CITY OF CHICAGO -0002833416 Complete List- Radio Station License

				UHF T-		
	LOW BAND	VHF	UHF	BAND	800 MHZ	MICROWAVE
1	KE8133	KA5025	KA83507	WPKY459	KDC618	WPYU857
2			1 10000			WQGZ549
	KRM715	KA5489	KAG839	WPSG985	KF8855	
3	KSD465	KBA321	KAZ996	WPYZ554	KV8496	WQOL272
4		KBW414	KAZ997	WQEV648	KXF483	
5		KBW415	KAZ998	WQEV649	WCN780	
6		KBW416	KAZ999	WQEW220	WCN820	
7		KBW421	KB54951	WQOU931	WCN821	
8		KC5285	KBA200		WCN846	
9		KE8048	KBA201		WCN847	
10		KF5671	KBA636		WCN860	
11		KGW529	KBJ308		WCN863	
12		KGY511	КВЈ773		WCN864	
13		KJY777	KK3637		WCN869	
14		KJY778	KNBJ580		WCN870	
15		КЈҮ779	KNBM258		WCN871	
16		KK9884	KNBM259		WCN872	
17		KKG461	KNEW594		WCN875	
18		KNDV404	KNEW595		WCN876	
19		KNFH932	KNFH932		WCN882	
20		KRW306	KNGN514		WCN884	
21		KSC711	KNGN516		WCN885	

CITY OF CHICAGO -0002833416 Complete List- Radio Station License

	LOW BAND	VHF	UHF	UHF T- BAND	800 MHZ	MICROWAVE
22			5	57.1.12		
-		KSC765	KRM715		WCQ695	
23		KSF382	KSJ745		WNDW413	
24		WHF745	KTO317		WNSS278	
25		WHF746	KUN507		WPFY216	
26		WHF747	KWB673		WPFY217	
27		WHG612	KXM321		WPFY218	
28		WHH322	KXV838		WPFY219	
29		WPJW746	KXZ273		WPFY220	
30		WPMF808	KY7503		WPFY221	
31		WPQG213	KZ9579		WPLU656	
32		WPSN981	WBR216		WPUV259	
33		WPUS583	WFK423		WPUV261	
34		WQCT234	WGQ939		WPUV262	
35		WQJD993	WPJN471		WQ0Z821	
36			WPJR951		WQPC968	
37			WPMG841			
38			WPMG842			
39			WPUP478			
40			WQBJ746			
41			WQKE545			

EXHIBIT B

Chicago Area Public Safety Communications Complete Overview

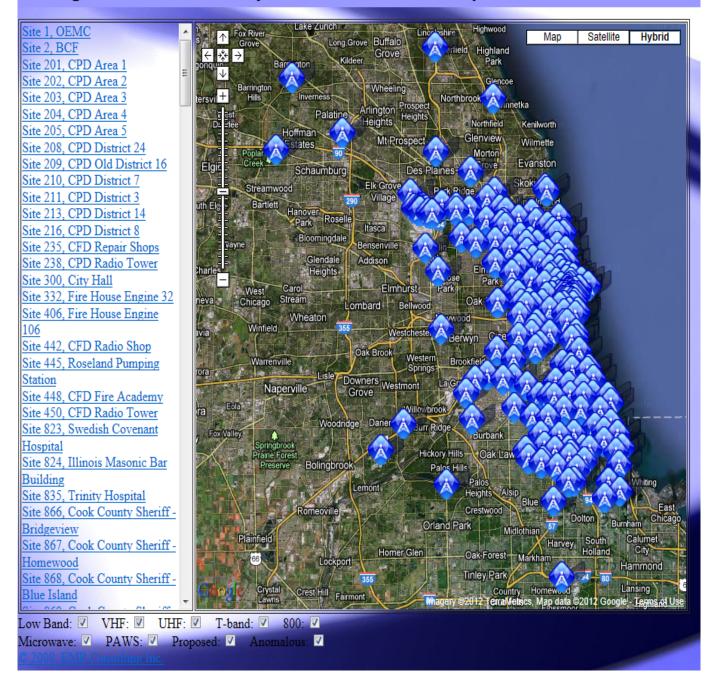


EXHIBIT C

Chicago Area Public Safety Communications Low Band Overview

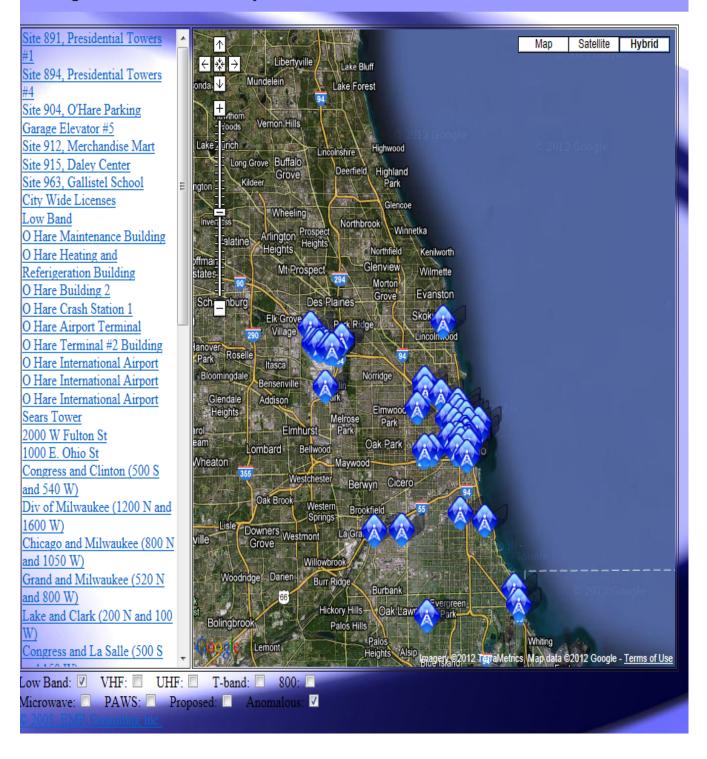


EXHIBIT D

Chicago Area Public Safety Communications VHF Overview

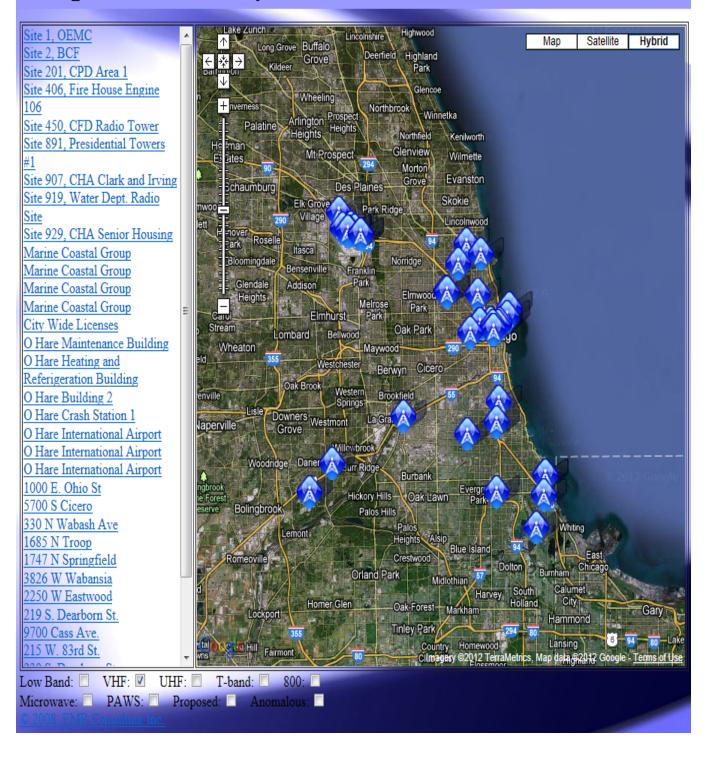


EXHIBIT E

Chicago Area Public Safety Communications UHF Overview

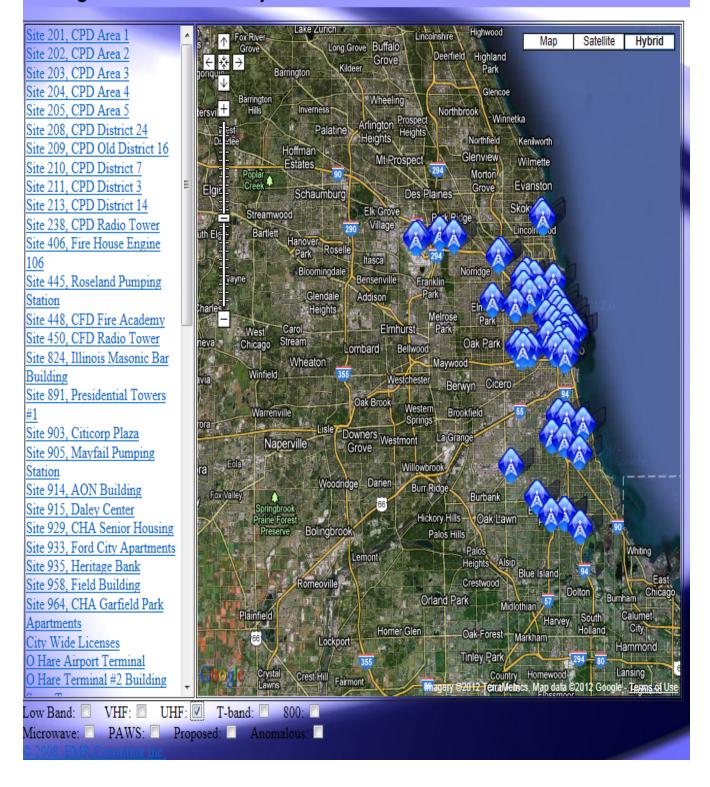


EXHIBIT F

Chicago Area Public Safety Communications UHF T-Band Overview

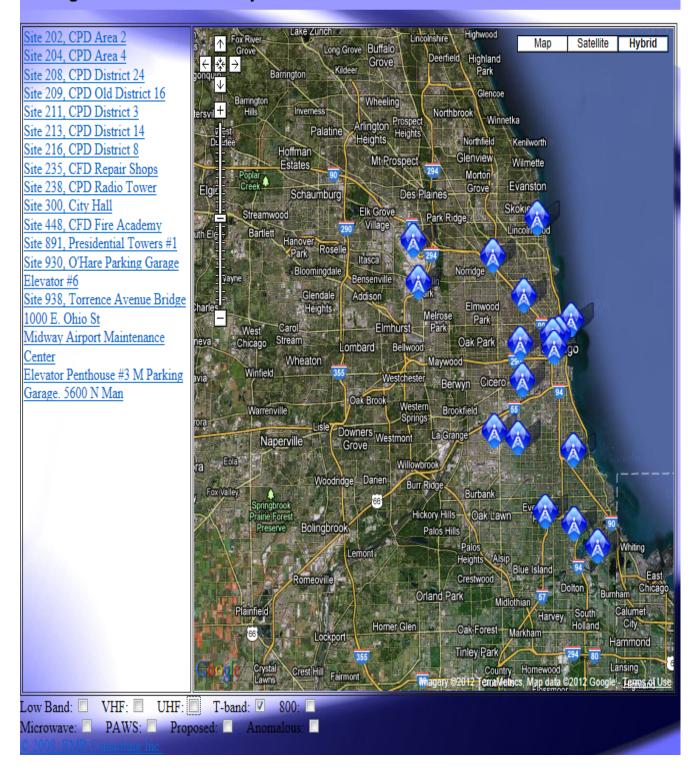
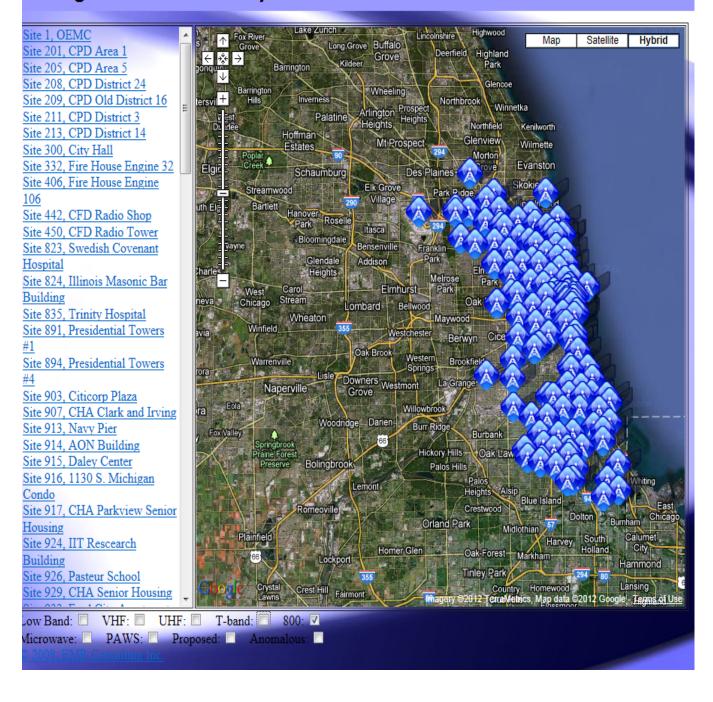
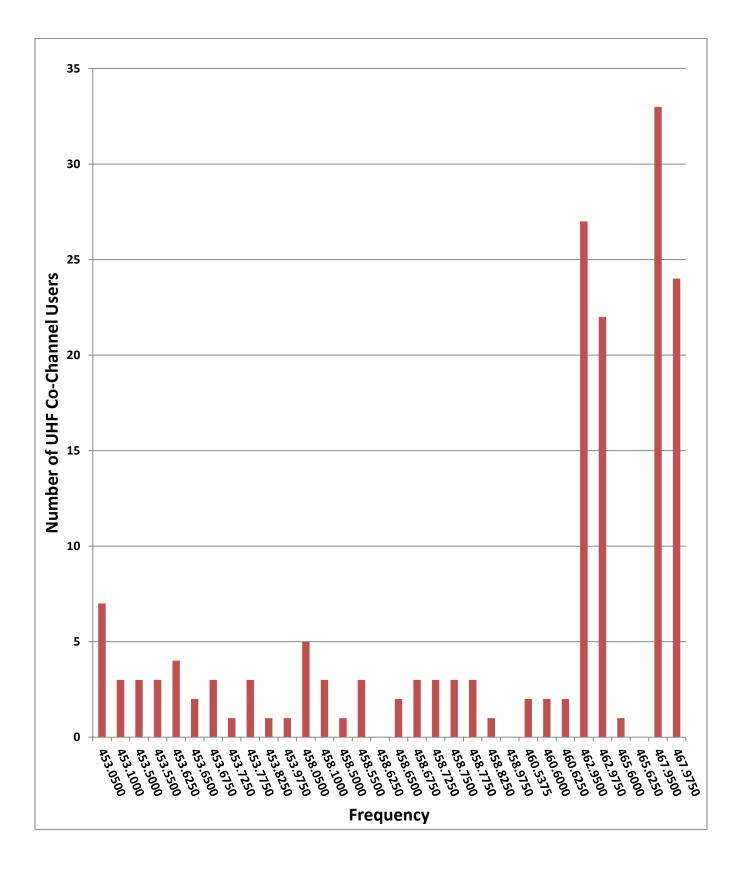


EXHIBIT G

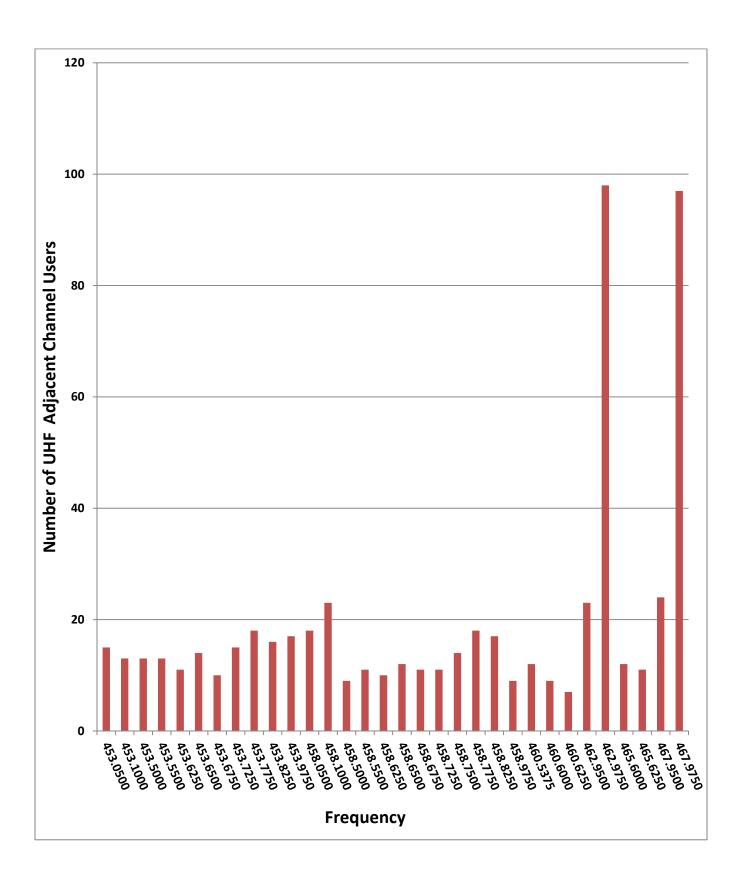
Chicago Area Public Safety Communications 800 MHz Voice and Data



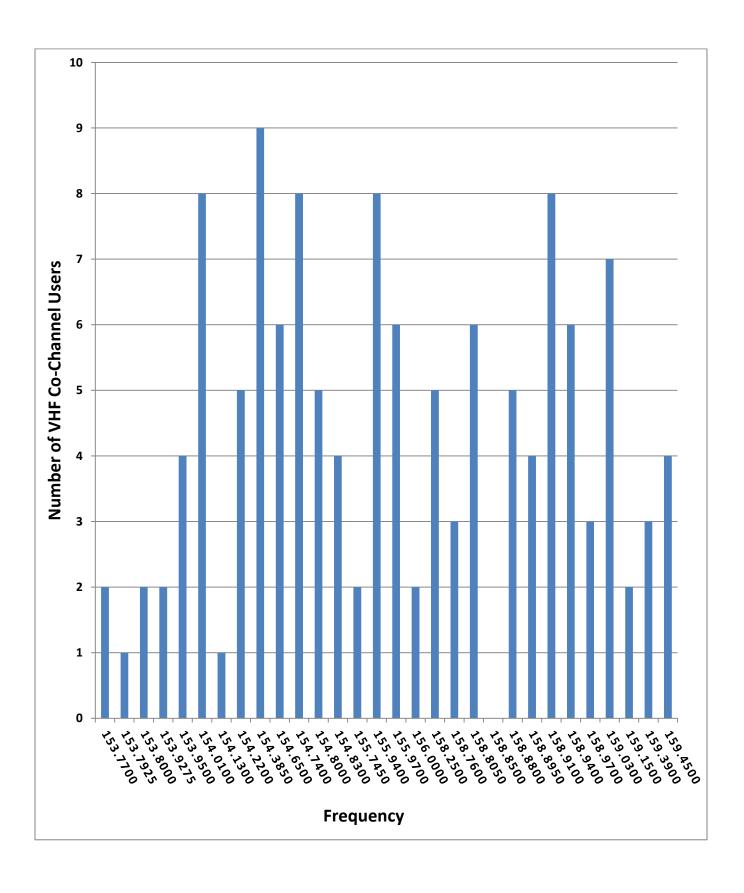
UHF Co-Channels User List Within 114 Km



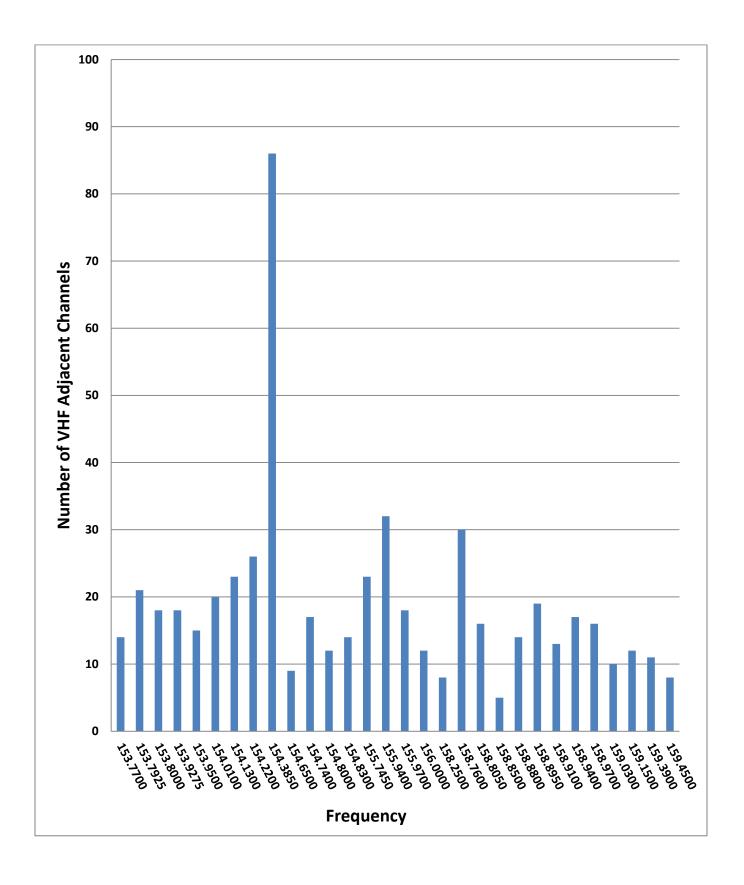
UHF Adjacent Channel User List Within 114 Km



VHF Co-Channels User List Within 114 Km



VHF Adjacent Channels User List Within 114 Km



Radio Station License Additional Time Requested

VHF CALL SIGNS	UHF CALL SIGN
1. KA5025	1. KB54951
2. KA5489	2. KBJ308
3. KBA321	3. КВЈ773
4. KBW414	4. KNEW594
5. KBW415	5. KNEW595
6. KBW416	6. KNFH932
7. KBW421	7. KNGN514
8. KC5285	8. KNGN516
9. KCS711	9. KRM715
10. KF5671	10. KWB673
11. KGW529	11. KXZ273
12. KJY777	12. KY7503
13. KJY778	13. KZ9579
14. KJY779	14. WBR216
15. KK9884	15. WFK423
16. KKG461	16. WGQ939
17. KNDV404	
18. KNFH932	
19. KRW306	
20. KSF382	
21. WPQG213	
22. WQCT234	

CITY OF CHICAGO -0002833416 Requested Frequencies for Additional Time

1	153.7700	453.0500
2	153.7925	453.1000
3	153.8000	453.5000
4	153.9275	453.5500
5	153.9500	453.6250
6	154.0100	453.6500
7	154.1300	453.6750
8	154.2200	453.7250
9	154.3850	458.7750
10	154.6500	453.8250
11	154.7400	453.9750
12	154.8000	458.0500
13	154.8300	458.1000
14	155.7450	458.5000
15	155.9400	458.5500
16	155.9700	458.6250
17	156.0000	458.6500
18	158.2500	458.6750
19	158.7600	458.7250
20	158.8050	458.7500
21	158.8500	458.7750
22	158.8800	458.8250
23	158.8950	458.9750
24	158.9100	460.5375
25	158.9400	460.6000
26	158.9700	460.6250
27	159.0300	462.9500
28	159.1500	462.9750
29	159.3900	465.6000
30	159.4500	465.6250
31		467.9500
32		467.9750